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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,407	07/01/2003	Ayae Endo	9319S-000521	1885
27572	7590	05/04/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			PATEL, ASHOK	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2879	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,407

Applicant(s)

ENDO ET AL.

Examiner

Ashok Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-30 is/are pending in the application.
- 4a) Of the above claim(s) 29 and 30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 23, 24, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 013006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. In view of applicant's persuasive arguments regarding Information Disclosure Statement (applicant's Remarks at page 5), the Examiner considers the Korean Document no. 2001/0062574. The Examiner lists this Korean document on enclosed form PTOL-892.

2. Claims 29 and 30 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- I Claims 23-28, drawn to an EL device and method of making electro-optics and EL devices, classified in class 313, subclass 504 (also class 427, subclass 58); and
- II Claims 29 and 30, drawn to a composition, classified in class 252, subclass 301.16.

3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the device and the method of making the device does not require the composition having

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transparent or semitransparent surfactant, as recited in claim 29; or the device and the method of making the device does not require the composition having surfactant with hydrophilic-lipophilic balance, as recited claim 30. The subcombination has separate utility such as a multilayered sheet.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 29 and 30 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

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6. Note that even though claims 29 and 30 depend upon claim base 23, claims 29 and 30 are directed to a composition, whereas base claim 23 is directed to a method of making an electro-optic device. Both are directed to patentably distinct different subject matters. Regarding composition claims 29 and 30, the Examiner does not give patentable weight to method limitations of the base claim 23. An action on merits including claims 23-28 is as follows.

7. Claims 23, 24 and 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 23, the terms "the base substrate", "the liquid material ejecting means", "a functional group", "the functional elements" etc. render the claim vague and/or indefinite. These terms either are used inconsistently or lacks antecedent basis.

As to claim 24, the term "functional element" at line 2 renders the claim vague in absence of the term "the" preceding the term "functional elements", since it remains unclear as to functional elements of claim 24 is same as or different from that of claim 23. The term "the functional" at line 2 lacks antecedent basis.

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As to claim 26, the term "a surfactant" renders the claim vague since it remains unclear as to whether surfactant of claim 26 is same as or different from surfactant of claim 25.

As to claim 27, the terms "the base substrate", "the liquid material ejecting means", "the material layers" lack antecedent basis.

As to claim 28, the term "a liquid material ejecting device" at line 3 renders the claim vague since it remains unclear as to whether liquid material ejecting device of claim 28 is same as or different from liquid material ejecting device of claim 27.

8. In view of applicant's persuasive arguments, claims 25-26 are allowed. However, applicant's arguments relating to amended version of claims 23, 24, 27 and 28 are not found persuasive.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 23, 24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US 2001/000 1050) in view of Cao (US 5,965,281).

Regarding claims 23 and 27, Miyashita discloses an organic EL device and a method of manufacturing the same, the EL device having functional elements selectively applied on an applying position surrounded by a partition wall 105 (see at least Figs. 1-5), including the steps of:

adding a liquid material containing a functional element constituting material and a solvent, and

sending the composition to liquid material ejecting means 109 through a passage 110, and applying the composition on the applying position surrounded by the partition wall on the base substrate with the liquid material injecting means, thereby forming a film which will become components of the functional element. Miyashita is silent regarding the film having uniform thickness and the liquid material further including a surfactant.

However, in the same field of endeavor, Cao discloses an organic EL device having functional elements and teaches to dissolve or disperse a surfactant on a functional element constituting material (see Col. 3, lines 40-41) with the purpose of improving electron injection into the functional element, while increasing environmental stability and external quantum

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efficiency, yet operating at low voltages (see at least Col. 3, lines 45-49 and 53-55).

Further providing uniformity of the film would have been obvious to one of ordinary skill in the art for maintaining uniform dimension of the film thereby increasing uniformity of brightness.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a surfactant to the liquid material of Miyashita, and uniform film thickness in order to improve electron injection into the functional element, while increasing environmental stability and external quantum efficiency, and increase uniformity of the rightness, yet operating at low voltages.

Regarding claim 24, Miyashita discloses the functional element being organic EL elements (paragraph 0041).

Referring to claim 28, Miyashita discloses the material layers being formed by ejecting liquid material containing the composition with a liquid material injection device 109.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-

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2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ashok Patel
Primary Examiner
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